

Remarks/Arguments

A. Claims in the Case

Claims 1 –10 and 12 – 24 have been rejected. Claim 11 has been objected to. Claims 13 and 22 have been amended. Claims 21, and 24 have been cancelled. Claims 27-42 have been added. Claims 1-20, 22-23, and 27-42 are pending.

B. Claim 1 Has Been Substantially Rewritten in Independent Form

In the Office Action, the Examiner stated that claim 11 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 1, and the claims dependent on claim 1 (claims 2-12), now include at least some features from claim 11. As such, Applicant submits that claim 1, and the claims dependent thereon, are in condition for allowance.

C. The Claims Are Not Obvious Over Wang Pursuant to 35 USC § 103(a)

The Examiner has rejected Claims 1 and 4-8 under 35 USC § 103(a) as allegedly being obvious U.S. Patent No. 5,725,153 granted to Wang et al. (hereinafter to as “Wang”). Applicant respectfully disagrees.

In order to reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner* et al., 379 F.2d 1011, 154 U.S.P.Q. 173, 177-178 (C.C.P.A. 1967). To establish a *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP § 2143.03.

Applicant’s amended claim 1 states:

1. A fluid spraying nozzle comprising:
an outer conduit; and
an inner conduit positioned within at least a portion of the outer conduit such that a gap is formed between the outer conduit and the inner conduit;
wherein a back portion of the outer conduit is coupled to a pressurized gas supply source,
wherein a back portion of the inner conduit is coupled with a fluid supply source, the fluid supply source being configured to supply a non-pressurized fluid, the fluid comprising a liquid, a solid, or a mixture of a liquid and a solid, and wherein a front portion of the inner conduit is configured to allow ejection of the fluid during use,
wherein the inner conduit and the outer conduit are composed of a flexible material, and wherein the front portion of the inner conduit and the front portion of the outer conduit move when gas is ejected from the outer conduit, and wherein the fluid is pulled from the fluid supply source through the inner conduit when gas is ejected from the outer conduit such that the fluid is mixed with the ejected gas,
wherein the nozzle further comprises a regulating member positioned proximate to the outer conduit, and an annular whisk coupled to an opening end of the regulating member.

Applicant submits that Wang does not appear to teach or suggest the combination of features of amended claim 1, nor are the feature obvious in view of the teachings of Wang. Applicant respectfully requests removal of the rejection of claim 1.

D. The Claims Are Not Obvious Over Wang In View Of Hasegawa Pursuant To U.S.C 103(a)

The Examiner has rejected Claims 2, 3, 9, 10 and 12-24 under 35 USC § 103(a) as allegedly being unpatentable over U.S. Patent number 5,725,153 granted to Wang et al. (hereinafter referred to as Wang) in view of Hasegawa, Japanese Publication H11 – 123350 (hereinafter referred to as “Hasegawa”). Applicant respectfully disagrees.

For at least the same reasons described above, Applicant submits that Wang fails to teach the combination of elements of Applicant's claim 1. Therefore, the features of dependent claims 2, 3, 9, 10 and 12, in combination with the features of claim 1, likewise do not appear to be taught or suggested by the cited art. Applicant respectfully requests removal of the rejection of claims 2, 3, 9, 10 and 12.

The Examiner has also rejected claims 13 – 20 under 35 USC § 103(a) as allegedly being unpatentable over Wang in view of Hasegawa. The Examiner asserts that the combined teachings of Wang and Hasegawa render Applicant's claim 13, and subsequent dependent claims 14 – 20, obvious. Applicant respectfully traverses.

Applicant's amended claim 13 is drawn in part to a fluid spraying apparatus that includes, but is not limited to the feature of:

a fluid supply source coupled to the inner conduit, the fluid supply source being configured to supply a non-pressurized fluid, the fluid comprising a liquid, a solid, or a mixture of a liquid and a solid, wherein the fluid supply source comprises a fluid container that is removably attached to the body;

Support for the amendments to claim 13 can be found, for example, in Applicant's specification, which states:

Fluid supply source 3 may include a cover 23 coupled to a main body 24. Fluid supply source 3 may be removably coupled to valve 9 using a suitable coupling mechanism (e.g., a screw mechanism).

During use fluid supply source 3 may be coupled onto valve 9 of a fluid spraying apparatus. The switch 10 of valve 9 is set in an open position when coupling the fluid supply source 3 to the valve to allow a fluid connection between insertion pipe 21 and inner conduit 14.

(Specification, page 12, lines 7-14)

Applicant submits that the cited references do not appear to teach or suggest at least this

feature.

For example, Wang appears to teach the use of a pressurized fluid supply source. For example, Wang states:

The liquid samples were introduced into the liquid capillary tube 1 by a Hewlett-Packard Model 1090 Liquid Chromatography Pump which is capable of delivering continuous liquid flows with 1 μ l/min. resolution. At liquid flow rates of 10 μ l /min. or less to cancel pulsation of the pump, a short length of 20 μ m i.d. silica capillary tube was placed in line between the pump and the liquid capillary 1.

(Wang, col. 6, line 63 - col. 7, line 6)

Wang appears to teach the coupling of a pump for conducting a fluid to a nozzle. The fluid supply source appears to be coupled to the nozzle via the pump. Applicant submits that Wang does not appear to teach or suggest at least the feature of “a fluid container that is removably attached to the body.”

Applicant further submits that Hasegawa does not teach or suggest at least the feature of “a fluid container that is removably attached to the body.” Hasegawa appears to describe a fluid delivery nozzle. With regard to coupling the nozzle of Hasegawa to a fluid supply source, Hasegawa states:

The support body 18 has a substantially cylindrical shape and is provided with a connection part 26 that can be connected to a fluid supply source, which is not shown in the figure, on its opposite side to the side on which the nozzle body 16 is supported. The connection part 26 is connected to the fluid supply source, whereby the support body 18 allows a fluid supplied from the fluid supply source to be introduced on the inner peripheral side of the nozzle body 16.

(Hasegawa, page 5, paragraph 0010)

In order to achieve the above-mentioned object, a fluid jet gun according to a first aspect of the present invention includes a nozzle formed of a flexible cylindrical

body and a circular guide disposed concentrically outside the nozzle and allows a liquid to pass through on an inner peripheral side of the nozzle to be jetted to thereby turn the nozzle along the guide, and is characterized in that an annular part concentric with the nozzle is disposed so as to come into contact with the fluid jetted from the turning nozzle to direct the fluid inward. Thus, when the nozzle allows a fluid to be jetted while turning along the guide, the fluid thus jetted comes to contact with the annular member disposed concentrically with the nozzle, and thus is changed in direction by the annular member so as to direct inward.

(Hasegawa, page 3, paragraph 0005)

Like Wang, Hasegawa also is directed to the use of a pressurized fluid supply source. Connection part 26 serves as a connector for coupling the nozzle to a pressurized fluid supply source. As described above, the passage of the pressurized fluid through the conduits provides a turning movement to the nozzle. Applicant submits that Hasegawa does not appear to teach or suggest at least the feature of “a fluid container that is removably attached to the body.”

Applicant further submits that the combination of Wang and Hasegawa does not appear to teach or suggest at least the feature of “a fluid container that is removably attached to the body.”

Applicant’s amended claim 22 is drawn in part to a fluid spraying apparatus that includes, but is not limited to the feature of:

passing gas through the outer conduit, wherein passage of gas through the outer conduit pulls fluid from the fluid supply source through and out of the inner conduit; and wherein the front portion of the inner conduit and the front portion of the outer conduit move within the body when gas from the pressurized gas supply source passes through the outer conduit; and

directing the fluid passing out of the inner conduit toward the surface.

Support for the amendments to claim 22 can be found, for example, in Applicant’s

specification, which states:

The apparatus described herein may be used to apply fluids to a variety of surfaces. In some embodiments, the apparatus may be used to apply fluids to the surface of a vehicle to clean, polish, wax, and/or treat surfaces (e.g., surfaces of the vehicle). Such apparatus may be useful for surfaces that are irregularly shaped such that they cannot be easily cleaned and/or treated with towels, grinders, polishers, hand cleaning, etc. As used herein the term vehicle includes, automobiles, trucks, trains, planes, and boats. Other surfaces may include walls of buildings (e.g., the application of paint), and floors (e.g., the application of waxes or polishes).

(Specification, page 7, lines 4-11)

With respect to claim 22, the Office Action states:

It would further be obvious to one of ordinary skill in the art at the time the invention was made to use the apparatus of Wang, as modified, on any user selected surface, including a vehicle surface, in order to clean or coat that surface with a user selected fluid, as is common in the art.

Applicant respectfully disagrees. Wang teaches that:

The present invention produces aerosol particles at lower liquid flow rates than is known possible with the prior art devices. The typical prior art nebulizers generally operate at liquid flow rates of approximately 50 μ l/min. to 1-2 ml/min. These types of nebulizers rely on the direct interaction between gas velocity and liquid jet to cause a breakup of the liquid jet into liquid particles. By operating at a lower liquid flow rate than the prior art nebulizers, the nebulizer of the present invention is able to achieve greater control over particle size and particle size distribution, more uniform particle sizes and smaller mean particle sizes than before. Furthermore, the particle drop sizes found are not much influenced by the surface tension or viscosity of the solvents used with typical pneumatic nebulizers.

(Wang, col. 3, lines 45-58)

Wang appears to be directed to a fluid delivery device that produces liquid flow rates that are less than 50 $\mu\text{l}/\text{min}$. At such flow rates the cleaning of a surface would be impractical. Applicant submits, therefore, that the Wang, as modified by Hasegawa, does not appear to teach or suggest the features of claim 22.

Summary

Based on the above, Applicant submits that the claims are now in condition for allowance. Favorable reconsideration is respectfully requested.

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10/084,629

Applicant respectfully requests a three-month extension of time. If any further extension of time is required, Applicant hereby requests the appropriate extension of time. A Fee Authorization is enclosed for the extension of time fee. If any additional fees, or if any required fees are inadvertently omitted or have been overpaid, please appropriately charge or credit those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5640-00500/EBM

Respectfully submitted,



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